

**PATENT COOPERATION TREATY**  
**PCT**  
**INTERNATIONAL SEARCH REPORT**  
(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>SH504430/142</b>	<b>FOR FURTHER ACTION</b> <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/NZ2004/000317</b>	International filing date ( <i>day/month/year</i> ) <b>7 December 2004</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>24 March 2004</b>
Applicant <b>AUCKLAND UNISERVICES LIMITED et al</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of **5** sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. ☒ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II).

3. ☐ Unity of invention is lacking (See Box No. III).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

- a. the figure of the drawings to be published with the abstract is Figure No. **10**

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

- b. ☐ none of the figures is to be published with the abstract.

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International application No.

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**Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)**

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:
- a. type of material
- ☒ a sequence listing
- ☐ table(s) related to the sequence listing
- b. format of material
- ☐ in written format
- ☒ in computer readable form
- c. time of filing/furnishing
- ☐ contained in the international application as filed
- ☒ filed together with the international application in computer readable form
- ☐ furnished subsequently to this Authority for the purposes of search
2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3. Additional comments:

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International application No.

PCT/NZ2004/000317

A. CLASSIFICATION OF SUBJECT MATTER												
Int. Cl. <sup>7</sup> : C07K 1/14 C07K 16/12 C12N 15/11 C12N 15/31												
According to International Patent Classification (IPC) or to both national classification and IPC												
B. FIELDS SEARCHED												
Minimum documentation searched (classification system followed by classification symbols) SEE ELECTRONIC DATABASES												
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched SEE ELECTRONIC DATABASES												
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Medline, CaPlus, Biosis, Biotechabs, Wpids (set1, set11, set22, ssl7, staphylococcal super antigen, staphylococcal exotoxin, IgA, Immunoglobulin? Immunoglobulin A, C5, C5a, C5b, complement 5, 5a, 5b), Dgene, SwissProt, SptrEMBLE, Genbank (Seq ID 6, 7, 12, 13)												
C. DOCUMENTS CONSIDERED TO BE RELEVANT												
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.										
P/A	Holden, M.T.G. 2004. Complete genomes of two clinical <i>Staphylococcus aureus</i> strains: Evidence for the rapid evolution of virulence and drug resistance. Proceedings of the National Academy of Sciences (USA). 101(26):9786-9791. See whole document.	1-35										
X A	WO 2002 077183 A (ELITRA PHARMACEUTICALS INC) 3 October 2002. (88% identity with Applicant's Seq ID 6 (Blastp) and 87% identity (Blastp) with Applicant's Seq ID 7). See whole document, especially claim 25 and Seq ID 70240.	32-35 1-35										
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex												
<p>* Special categories of cited documents:</p> <table border="0"> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</td> </tr> <tr> <td>"E" earlier application or patent but published on or after the international filing date</td> <td>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</td> </tr> <tr> <td>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</td> <td>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td>"&amp;" document member of the same patent family</td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art	"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family	"P" document published prior to the international filing date but later than the priority date claimed	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention											
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone											
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art											
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family											
"P" document published prior to the international filing date but later than the priority date claimed												
Date of the actual completion of the international search 4 February 2005		Date of mailing of the international search report 14 FEB 2005										
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer  DAVID OLDE Telephone No : (02) 6283 2569										

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International application No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	WO 2002 094868 A (CHIRON SPA) 28 November 2002. (90% identity with Applicant's Seq ID 6 (Blastp) and 87% identity (Blastp) with Applicant's Seq ID 7). See whole document, especially Seq ID 1784.	32-35 1-35
X A	Arcus, V.L. <i>et al.</i> 2002. The three-dimensional structure of a superantigen-like protein, SET3, from a pathogenicity island of the <i>Staphylococcus aureus</i> genome. The Journal of Biological Chemistry. 277(35):32274-32281. See whole document.	32-35 1-35
X	TrEMBLE Accession No: Q8NY48. Set22 protein. 1 October 2002. Baba, T. <i>et al.</i> (94% identical (Blastp) to Applicant's Seq ID 6).	32-35
A	See Also, Baba, T. <i>et al.</i> 2002. Genome and virulence determinants of high virulence community-acquired MRSA. The Lancet. 359:1819-1827. See whole document.	1-35
X A	Kuroda, M. <i>et al.</i> 2001. Whole genome sequencing of meticillin-resistant <i>Staphylococcus aureus</i> . The Lancet. 357:1225-1240. See whole document.	32-35 1-35
X A	Williams, R.J. <i>et al.</i> 2000. Identification of a novel gene cluster encoding <i>Staphylococcal</i> exotoxin-like proteins: characterization of the prototypic gene and its protein product, SET1. Infection and Immunity. 68(8):4407-4415. See whole document.	32-35 1-35

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
WO	02094868	CA	2440368	EP	1373310
WO	02077183	AU	49345/01	CA	2404260
		US	2002061569	US	2004029129
				EP	1268774
				WO	0170955
Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.					
END OF ANNEX					